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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/610,689

06/30/2003

Douglas R. Carrell

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EXAMINER

PRICE, NATHAN E

ART UNIT

PAPER NUMBER

2194

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/610,689

Applicant(s)

CARRELL ET AL.

Examiner

Nathan Price

Art Unit

2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 14-20, 23-29 and 32-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 14-20, 23-29 and 32-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to communications received 29 November 2006. Claims 1 – 11, 14 – 20, 23 – 29 and 32 – 36 are pending. Previous objections and rejections not included in this Office Action have been withdrawn.

Response to Arguments

2. Applicant's arguments filed 29 November 2006 regarding trademarks/trade names have been fully considered but they are not persuasive. Applicant argues that TCP and SNA are well-defined protocols. However, if changes are made to the definition (for example, an updated version of the protocol) after Applicant's filing of the original disclosure, then it is possible that the original disclosure is not enabled for the changes made to the protocol. See also the newly cited portions of Tanenbaum.

3. Applicant's arguments filed 29 November 2006 regarding converting header information have been fully considered but they are not persuasive. Marcos teaches converting between message protocols [col. 4 lines 35 – 45]. The combination of Marcos and Taylor teaches integration of TCP and SNA [Taylor page 386] and that FMH7 can be part of a request header [Taylor page 68]. When converting between message protocols, it would have been obvious to convert the header information, such as the error information taught by Taylor.

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4. Applicant indicates that the claim amendments do not constitute new matter and point to paragraph 0056 of the specification [REMARKS page 12]. However, it does not appear that paragraph 0056 discloses *header* information usable with a TCP protocol. It is noted that original claims 30 and 31 (received 30 June 2003) appear to include similar limitations regarding header information.

Drawings

5. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6. If Applicant believes that the figure is not prior art, then it is respectfully requested that Applicant clearly indicate what element or combination of elements distinguishes Figure 1 from the prior art.

Claim Objections

7. Claims 1 – 11 and 23 – 29 are objected to because of the following informalities:

There is insufficient antecedent basis for "said TCP protocol" in line 12 of claim 1.

There is insufficient antecedent basis for "the first system" in line 11 of claim 23.

There is insufficient antecedent basis for "the error information" in line 12 of claim 23.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1 – 6, 8, 10, 11, 14 – 20, 23 – 25, 27 – 29 and 32 – 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marcos et al. (US 6,347,342 B1; hereinafter Marcos) in view of Taylor (see PTO-892 mailed 22 August 2006).

9. As to claim 1, Marcos teaches a method of enabling a first system to use a second system [col. 4 lines 60 - 62] comprising:

receiving, from the first system, a first request directed to the second system, said first request being in a form adapted for the first system but not for the second system [col. 4 lines 14- 19, 60- 62];

performing a first conversion of said first request to produce a second request, said second request being in a form adapted for said second system but not for said first system [col. 4 lines 15 - 34];

invoking the processing of said second request by the second system [col. 4 lines 35 - 45];

receiving a first reply from the second system [col. 4 lines 35 - 45];

performing a second conversion of said first reply to produce a second reply [col. 4 lines 35 - 45]; and

providing said second reply to said first system [col. 4 lines 35 - 45].

10. Marcos fails to specifically disclose an FMH7 field of an SNA protocol. However, Taylor discloses error information comprising an FMH7 field of an SNA protocol [page 68: FMH7]. When combined, the references disclose that said error-handling object [Marcos: col. 12 line 66 - col. 13 line 11] creates header information representative of the contents of said FMH7 field [Taylor: page 68: FMH7], said header information being adapted for use with a TCP protocol [Taylor: page 386 ¶ 2, integration of TCP/IP and SNA]. It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine these references because Marcos discloses providing communication between different systems without restricting the type of system or protocol, but does provide TCP/IP as a specific example [col. 4 lines 15 - 25; col. 8 lines 39 - 44] and Taylor discloses integration of specific protocols [page 386 ¶ 2].

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11. As to claim 2, Marcos discloses that said first request comprises a datum in a first format, and wherein said act of performing said first conversion comprises converting said datum to a second format different from said first format, said second request comprising said datum in said second format [col. 4 lines 14- 19; col. 17 lines 9 - 22].

12. As to claim 3, Marcos discloses that said first request comprises a datum having a first type [col. 4 lines 26 - 34] and wherein said act of performing said first conversion comprises converting said datum to a second type different from said first type, said second request comprising said datum in said second type [col. 4 lines 26 - 34].

13. As to claim 4, Marcos discloses that said first type is supported in said first system but not in said second system [col. 15 line 62 - col. 16 line 4].

14. As to claim 5, Marcos discloses that said second type differs structurally from said first type in at least one aspect [col. 15 line 62 - col. 16 line 55].

15. As to claim 6, Marcos discloses that said first request comprises a call using a first mechanism to a software object in the second system, and wherein said act of performing said first conversion comprises converting said call for use with a second mechanism different from said first mechanism [col. 4 lines 14 - 45].

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16. As to claim 8, Marcos discloses that said first request comprises a remote call according to a first protocol, wherein said second request comprises a remote call according to a second protocol different from said first protocol, and wherein said act of performing said first conversion comprises preparing said second request to correspond substantively with said first request and to work in accordance with said second protocol [col. 4 lines 20 - 25].

17. As to claim 10, Marcos discloses that said first system is adapted to communicate a remote call according to a first network protocol, and wherein said first and second requests, and said first and second replies, are transmitted using a second network protocol different from said first network protocol, and wherein said acts of performing first and second conversions comprise including in said second request and said second reply header information that corresponds to information that is contained in requests or replies according to said first protocol [Fig. 3C; col. 8 lines 18 - 44].

Although Marcos fails to specifically disclose that the requests and replies are in a protocol incompatible with the first system, multiple protocols are disclosed. Also, as seen in Figure 3C, the mediating components can be located on both the client and server machines, allowing for protocol conversion before transmission and a second conversion at the server. Furthermore, the disclosed network protocols include the claimed header information.

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18. As to claim 11, Marcos discloses that said first request comprises a call to a software object in said second system, and wherein the form of said first request is adapted for making requests from the first system to a remote system that is of the same type of environment as the first system [col. 3 lines 39 - 67; col. 4 lines 14 - 63].

19. As to claim 14, Marcos discloses a method of enabling a first software object in a first system to call a second software object in a second system [col. 4 lines 14 - 20], the method comprising:

- evaluating first information that the first software object exposes when making a call to a remote system [col. 6 lines 50 - 65];

- evaluating second information that the second software object exposes when receiving a call from a remote system [col. 7 lines 6 - 43];

- generating conversion information descriptive of a process to be followed in order to convert the first information into a form compatible with the second information [col. 6 lines 50 - 65; col. 7 lines 6 - 43];

- providing the conversion information to a conversion service that uses the conversion information to convert a first call from the first object into a call in a form usable by the second object [col. 6 lines 50 - 65; col. 7 lines 6 - 43].

20. The combination of Marcos and Taylor teaches conversion information describing the conversion of an FMH7 field in an SNA protocol into header information usable with a TCP protocol for the reasons in the rejection of claim 1.

21. As to claim 15, Marcos discloses that the first information comprises a call parameter in a first format, wherein the second information comprises a call parameter in a second format, and wherein the act of generating conversion information comprises generating code or data that describes how to convert a call parameter from the first format to the second format [col. 7 lines 6 - 23; col. 17 lines 9 - 21].

22. As to claim 16, Marcos discloses that the first information comprises a call parameter of a first data type which is not usable by the second software object [col. 15 line 62 - col. 16 line 4], and wherein the act of generating conversion information comprises:

generating a second data type that corresponds to the first data type and which is usable by the second software object [col. 7 lines 6 - 43];

generating code or data that describes how to convert data of the first data type to the second data type [col. 7 lines 6 -43].

23. As to claim 17, Marcos discloses that the first information comprises a return value in a first form, wherein the second information comprises a return value in a second form different from said first form, and wherein the act of generating conversion information comprises generating code or data that describes how to convert data in said first form to said second form [col. 4 lines 14 - 20; col. 7 lines 6 - 43, 55 - 67].

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24. As to claim 18, Marcos discloses that said first software object makes a call to a remote system according to a first programming model, wherein said second data object receives a call from a remote system according to a second programming model, and wherein the act of generating conversion information comprises generating code or data that indicates which programming model the first software object uses to make a remote call [col. 7 lines 24 - 43].

25. As to claim 19, Marcos discloses that the act of generating conversion information comprises generating code or data that describes at least one customization in converting from the first programming model to the second programming model [col. 7 lines 6 - 43].

26. As to claim 20, Marcos discloses that the act of generating conversion information comprises generating a transaction initiation message that is used in invoking the second software object or in reply to the first software object [col. 7 lines 6 - 23; col. 10 line 43 - col. 11 line 14].

27. Regarding the hardware comprising a processor and execution on hardware of claims 23 - 29, see Marcos column 5 lines 43 - 62.

28. As to claims 23 and 24, see the rejection of claim 1. Although claim 1 recites elements as systems instead of objects, the rejection cites the proper parts of Marcos.

29. As to claim 25, Marcos discloses that the service object comprises a listener object that detects that a contact regarding the first request has been made by the first software object [col. 3 lines 60 - 67].

30. As to claim 27, Marcos discloses that the service object comprises a transit object that receives information related to the first request from the first software object and prepares the information into a form that can be used for a call to the second software object [col. 4 lines 14 - 34].

31. As to claim 28, Marcos discloses that the service object comprises an invocation object that lays out the information prepared by the transit object into a form that can be used for a call to the second software object, and that uses the laid out information to invoke the second software object [col. 4 lines 14 - 34].

32. As to claim 29, Marcos discloses that the service object comprises a flow control object that manages the interaction of one or more components involved in the conversion of the first request into the second request [col. 7 lines 6 - 43].

33. As to claim 32, see the rejections of claims 1 and 23.

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34. As to claim 33, Marcos discloses that the instructions are adapted to perform acts further comprising:

listening for a connection from the first system [col. 3 lines 60 - 67]; and
receiving information related to the first call in response to the connection
[col. 4 lines 14 - 34].

35. As to claim 34, Marcos discloses that the first call comprises data in a first form, and that the instructions are adapted to perform acts further comprising converting the data from the first form into a second form usable by the second software object [col. 4 lines 14 - 34].

36. As to claim 35, Marcos discloses that the second software object provides a first reply in response to being called, and wherein the instructions are adapted to perform acts further comprising converting the first reply into a second reply, the second reply being in a form that is compatible with the first software object or the first system, the first reply being in a form that is not compatible with the first software object or the first system [col. 4 lines 14 - 45].

37. As to claim 36, Marcos discloses that the second software object generates error information in response to being called, and wherein the instructions are adapted to perform acts further comprising converting said error information into a format compatible with the first software object or the first system, or into a format compatible

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with a communication protocol employed by the first system [col. 12 line 66 - col. 13 line 11; col. 4 lines 35- 45].

38. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marcos in view of Taylor as applied to claim 1 above, and further in view of Lymer et al. (US 6,230,117 B1; hereinafter Lymer).

39. As to claim 7, Marcos fails to specifically disclose a commarea. However, Lymer discloses that said first mechanism comprises a commarea that is used to pass a call parameter to said object and to receive a result from said object, and wherein said second mechanism comprises: a first area that is used to pass said call parameter, or a converted call parameter that corresponds to said call parameter, to said object; and a second area that is used to receive said result, or a converted result that corresponds to said result, from said object [Fig. 1; col. 3 line 61 - col. 4 line 4]. It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine these references because both focus on interfacing between different computing environments.

40. Claims 9 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marcos in view of Taylor as applied to claims 1 and 23 above, and further in view of Tanenbaum (Tanenbaum, Andrew S., "Computer Networks," Third Edition, Prentice Hall PTR, 1996.).

41. As to claim 9, Marcos fails to specifically disclose that one protocol is bidirectional and one is unidirectional. However, when combined with Tanenbaum, the two references disclose that said first protocol calls for invocation to be performed with a bidirectional interaction between a caller and a callee, wherein said second protocol calls for an invocation to be performed in a unidirectional call message from said caller to said callee [Tanenbaum: page 23, connection-oriented and connectionless service], and wherein said act of preparing said second request comprises:

- engaging in an interaction with the caller on the first system to obtain information relating to a call [Marcos: col. 10 lines 43 - 55];
- collecting said information [Marcos: col. 10 lines 56- 67]; and
- preparing said second request using the collected information [Marcos: col. 10 lines 56- 67].

42. It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine these references because, although Marcos discloses details of enabling incompatible environments to communicate, the reference does not go into details of how networks operate, which is provided by Tanenbaum.

43. As to claim 26, Marcos fails to specifically disclose queuing. However, Tanenbaum discloses a queuing object that queues at least one of connections and

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requests from the first system [page 202, sliding windows]. See the rejection of claim 9 for motivation to combine.

Conclusion

44. The prior art made of record on the P.T.O. 892 that has not been relied upon is considered pertinent to applicant's disclosure. Careful consideration of the cited art is required prior to responding to this Office Action, see 37 C.F.R. 1.111(c).

45. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Price whose telephone number is (571) 272-4196. The examiner can normally be reached on 6:30am - 3:00pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on (571) 272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NP


WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER